

AMENDMENTS TO THE CLAIMS

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

Listing of Claims:

1. (Original) An apparatus for inspecting a substrate, comprising:
 - a first stage for supporting a substrate;
 - a first image acquisition unit for acquiring a first image of a peripheral portion of the substrate supported by the first stage;
 - a second stage for supporting the substrate;
 - a second image acquisition unit for acquiring a second image of the substrate supported by the second stage;
 - a transfer robot for transferring the substrate between the first stage and the second stage; and
 - a data processing unit, connected to the first image acquisition unit and the second image acquisition unit, for inspecting results of an edge bead removal process and an edge exposure process performed on the substrate using the first image, and for inspecting for defects of patterns formed on the substrate using the second image.

2. (Original) The apparatus for inspecting a substrate as claimed in claim 1, wherein the first image acquisition unit comprises:
 - a charge coupled device camera positioned over the substrate supported by the first stage for acquiring the first image; and
 - a light source for illuminating the peripheral portion of the substrate.

3. (Original) The apparatus for inspecting a substrate as claimed in claim 2, wherein the light source is a light emitting diode.

4. (Original) The apparatus for inspecting a substrate as claimed in claim 2, wherein the data processing unit calculates a distance from a side surface of the substrate to a side surface of a photoresist film including the patterns in the first image and inspects results of an edge bead removal process and an edge exposure process performed on the substrate from the calculated distance.

5. (Original) The apparatus for inspecting a substrate as claimed in claim 2, further comprising a first driving unit and a second driving unit for causing a relative motion between the substrate supported by the first stage and the charge coupled device camera so that the first image acquisition unit acquires the first image.

6. (Original) The apparatus for inspecting a substrate as claimed in claim 5, wherein the first driving unit and the second driving unit comprise:

a first driving unit for moving the charge coupled device camera along a flat zone portion of the substrate supported by the first stage; and

a second driving unit for rotating the first stage.

7. (Original) The apparatus for inspecting a substrate as claimed in claim 1, wherein the second image acquisition unit comprises:

an illuminating section for directing an illuminating light at an angle towards the substrate supported by the second stage; and

a detecting section for detecting light reflected from the substrate to acquire the second image.

8. (Original) The apparatus for inspecting a substrate as claimed in claim 7, wherein the illuminating section comprises:

- a beam generator for providing a laser beam;
- a beam expander for expanding the laser beam;
- a reflecting mirror for reflecting the expanded laser beam;
- a beam deflector for deflecting the reflected laser beam; and
- a focusing lens for focusing the deflecting laser beam onto the substrate supported by the second stage.

9. (Original) The apparatus for inspecting a substrate as claimed in claim 8, further comprising a third driving unit for moving the second stage so that the focused laser beam scans the entire surface of the substrate supported by the second stage.

10. (Original) The apparatus for inspecting a substrate as claimed in claim 1, wherein the data processing unit detects defects of the patterns formed on the substrate by comparing the second image with a reference image.

11. (Original) The apparatus for inspecting a substrate as claimed in claim 10, further comprising a data storage unit for storing the reference image.

12. (Original) The apparatus for inspecting a substrate as claimed in claim 7, wherein the second image comprises a reticle identification number or a reticle identification pattern for identifying a reticle used for forming the patterns.

13. (Original) The apparatus for inspecting a substrate as claimed in claim 1, further comprising an alignment mark sensor positioned above the substrate supported by the first stage for aligning the substrate supported by the first stage.

14. (Original) The apparatus for inspecting a substrate as claimed in claim 1, further comprising a data storage unit for storing inspection results processed by the data processing unit.

15. (Original) The apparatus for inspecting a substrate as claimed in claim 14, further comprising a display unit for displaying the inspection results.

16. (Original) The apparatus for inspecting a substrate as claimed in claim 1, further comprising a display unit for displaying the first and the second images.

17. (Currently Amended) A method for inspecting a substrate, comprising:
loading a substrate on a first stage;
acquiring a first image of a peripheral portion of the substrate loaded on the first stage;
inspecting results of an edge bead removal process and an edge exposure of ~~water~~ wafer process performed on the substrate using the first image;
transferring the substrate onto a second stage;

acquiring a second image of another portion of the substrate supported by the second stage; and

inspecting defects of patterns formed on the substrate using the second image.

18. (Original) The method for inspecting a substrate as claimed in claim 17, wherein the substrate includes a silicon wafer, and acquiring the first image further comprises rotating the substrate and continuously acquiring the first image of the peripheral portion of the rotating substrate using an image acquisition unit disposed over the peripheral portion of the substrate.

19. (Currently Amended) The method for inspecting a substrate as claimed in claim 17, wherein inspecting the results of the edge bead removal process and the edge exposure of ~~water~~ wafer process further comprises:

calculating a distance from a side surface of the substrate to a side surface of a photoresist film using the first image; and

judging the results of the edge bead removal process and the edge exposure of ~~water~~ wafer process using the calculated distance.

20. (Original) The method for inspecting a substrate as claimed in claim 17, wherein acquiring the second image further comprises:

illuminating a light onto the substrate supported by the second stage;

moving the substrate so that the light scans an entire surface of the substrate supported by the second stage; and

acquiring the second image a light reflected from the substrate.

21. (New) The apparatus for inspecting a substrate as claimed in claim 1, wherein the first stage is in a first inspection chamber, and the second stage is in a second inspection chamber.

22. (New) The method for inspecting a substrate as claimed in claim 17, wherein the first stage is in a first inspection chamber, and the second stage is in a second inspection chamber.